

REMARKS

Applicant respectfully requests reconsideration of the application.

Claims 1, and 3-18 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,477,276 to Inoue et al. ("Inoue"). Claims 2 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue.

Regarding claim 1, the Office contends that Inoue's teaching of calculating a mean and quantizing this mean value corresponds to "computing a statistical distribution of the classes." The mean value is not a statistical distribution of the transform coefficients in Inoue, nor does it represent the statistical distribution of the values. Instead, it is the average of these coefficients. The mean provides a single number, the average, for the group of coefficients. This average number could correspond to several different statistical distributions. As such, it cannot be or accurately represent a statistical distribution. In contrast, the statistical distribution is an arrangement of values that shows the frequency of occurrence of the values in a set. See, for example, the examples of the distributions for four classes shown in Fig. 4.

The quantization value cited in Inoue is the quantization of the mean into another number, which is either even or odd. The quantization value does not correspond to a statistical distribution for the same reason that mean value does not.

Since Inoue does not teach the statistical distribution as claimed, it further does not teach: "using the statistical distribution to detect or read a watermark in the media signal." The mean or its quantization value do not and cannot represent a statistical distribution as claimed, and therefore, do not correspond to a statistical distribution used to detect or read a watermark.

In view of the above, Inoue does not teach all of the elements of claim 1, and as such, clearly does not anticipate claim 1.

Claims 3-11 are patentable over Inoue for at least the same reasons as provided for claim 1. Because Inoue lacks fundamental teachings necessary to render claim 1 obvious, it cannot render claim 2 obvious either.

Claim 12 is amended to clear up a potential antecedent basis issue with "the statistical model." Inoue's calculating mean and quantization value for the groups do not correspond to: "modeling a statistical distribution of the samples in each of the classes to compute models of the statistical distributions of the classes; and using the models of the statistical distributions to

decode a watermark from the samples.” Inoue’s mean of a group cannot model the statistical distribution of the coefficients in the group because the mean is incapable of representing the distribution of the coefficients. Many different distributions of the coefficients can have the same mean, and therefore, a mean is insufficient for modeling the statistical distribution. Therefore, the mean and quantization values for the groups are not models of the statistical distributions of the groups in Inoue and are not relevant to claim 12.

Claims 13-14 are patentable for at least the same reasons provided for claim 12.

Inoue, likewise, fails to teach all of the elements of claim 15. In particular, it fails to teach: “computing a statistical distribution of the samples in each of the classes; and using the statistical distribution to decode a watermark from the watermarked signal” in combination with the other claim elements. Again, Inoue’s calculating of a mean is clearly not equivalent to computing a statistical distribution of the samples in each of the classes. As such, Inoue does not teach this aspect of claim 15, and it further cannot teach “using the statistical distribution” as claimed to decode a watermark because the mean and quantization of it are not a statistical distribution.

Claims 16-18 are patentable for at least the reasons provided for claim 15.

Finally, the teachings Inoue do not render claim 19 obvious because these teachings do not even suggest elements of the claims, including: “modeling distributions of the classes; and estimating the watermark signal based on the suspect signal, the distributions of the classes, and a distribution of the watermark signal” in combination with the other elements of claim 19. Inoue’s approach of calculating a mean for each group does not correspond to modeling distributions of the classes because the mean cannot model the distribution for a group. Further, Inoue’s quantizing of the mean is not modeling of the distribution of the classes, and therefore, the quantizing cannot correspond to estimating the watermark signal based on distributions of the classes. Finally, Inoue is silent regarding estimating the watermark signal based on the distribution of the watermark signal, and therefore, does not suggest this aspect of the claim.

Claim 20 is patentable for the same reasons as claim 19.

In view of the above, the claims are patentable over Inoue.

Respectfully submitted,

Date: January 17, 2008

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